

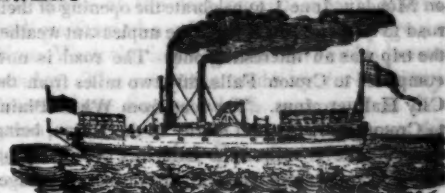
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY

AND MINES.

ESTABLISHED 1831.



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SATURDAY, JULY 3, 1847.

[WHOLE No. 576, VOL. XX.]

Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED AT 105 CHESTNUT ST. PHILADELPHIA.

Saturday, July 3, 1847.

A Substitute for Oil in Machinery.

Experiments are being tried upon the New Jersey railroad to test the merits of a substitute for oil on the axles of the cars. The substitute used is cold water. It is applied to the axletree by means of a small wheel, armed with buckets, and enclosed within the box that confines the end of the axle and contains the water. Its operation is similar to that of the trough of water under the grindstone, and the greater the velocity of the wheel, so much the more completely is the end of the axle buried in water.—The New York Post says:

"After running the car to which it is applied, 15 miles, for instance, at the high speed of a swift train, we found the water in the box as cold as when it was put there, the end of the axle was without any perceptible degree of heat, and the water had no more discoloration than might have been caused by the dust in the box. Fifteen miles, run at high speed, was sufficient to test the experiment, and such were the results. The principle upon which the patentee bases this application of cold water is, that the heat or electric influences formed at the extremities of the axle are dissipated or conveyed away by the water, just as the atmosphere and the rain convey the electricity of the heavens to the earth. In an economical point of view, the successful application of water to machinery as a substitute for oil will save to the State of New York annually, as it is estimated, nearly two hundred thousand dollars."

Anthracite Coal Burning Engines.

We understand that Mr. Ross Winans, of Baltimore, has, with an engine of his construction, completed several very successful trips over the Beading railroad, with the entire use of anthracite coal as a fuel. The loads carried, as well as the time expended in taking trains over this road have been quite equal to the best performances made by their wood burning engines. On Friday last we understand she took a train of 90 loaded cars from Schuylkill Haven to the Falls Bridge, 84 miles, in 10 hours, this is considered better than an average trip for the engines on this road.

Mr. Winans has long labored to perfect the burning of coal in locomotive engines, and for several years past has been building engines for the Baltimore and Ohio railroad company, which burn with complete success the bituminous coal of the region traversed by that road. The success of his engines on the Reading railroad will doubtless add to his well-earned reputation as an engineer, and be a source of much gratification to all railroad companies desiring to make use of anthracite coal as a fuel. We hope soon to be able to lay before our readers a full account of this engine.

Newcastle and Wilmington Railroad.

We find the following advertisement in the North American of this morning, accompanied by an appropriate notice. We give them a place in the Journal, in the spirit of doing a service to the cause, and in the hope of promoting this particular object, as we consider it a very important one.

NOTICE.—The undersigned, Commissioners appointed by an Act of the Legislature of the State of Delaware, to receive subscriptions to the Capital Stock of the "NEWCASTLE AND WILMINGTON RAILROAD COMPANY," hereby give notice, that books will be opened for that purpose on MONDAY, the fifth day of July next, at 10 o'clock, A. M., at the Exchange, in the city of Philadelphia, at the Hotel of John Hall, in the city of Wilmington, and at the Hotel of Isaac H. Register in the town of Newcastle.

JOHN A. BROWN,
J. C. DU PONT,
PHILIP REYBOLD,
WILLIAM COWPER,
ELIHU JEFFERSON,
ANDREW C. GRAY.

June 29, 1847.

The editor of the North American says, "We invite attention to the advertisement in another column, of the Commissioners of the Newcastle and Wilmington Railroad Company, noting their intention to open the books to receive subscriptions on

Monday next, at Newcastle, Wilmington and Philadelphia. The project of this road appears to be of considerable interest to our business men of Philadelphia, and we might add to our friends in Wilmington, as it will complete an important connection for the commerce of both with the winter harbor at Newcastle. It is believed that it will prove of value as a lateral route or feeder to the Wilmington and Baltimore Railroad. The whole route is described as being of less than four miles in extent, and over excellent ground for the purpose."

Strawberries and Milk.

A letter from H. C. SEYMOUR, Esq., superintendent of the New York and Erie Railroad, to Mr. Marsh, the Secretary, says:

"The milk train of Tuesday night (22d instant) took to New York 80,000 baskets of strawberries. These baskets are intended to contain one pint each; but say that three baskets contain one quart, which is quite within bounds. Then we had 26,667 quarts, or eight hundred and thirty-three bushels. These strawberries will no doubt weigh 65 pounds to the bushel, but say 60, then we had twenty-five tons of strawberries alone. The boxes and baskets weigh as much more, so that the freight was at least fifty tons. By the same train we had 28,000 quarts of milk, which weigh (a pint a pound) twenty-eight tons, and including cans, 35 tons; making a freight of eighty-five tons of strawberries and milk. The milk by both our trains equals fifty tons (50,000 quarts) daily; and including cans, 63 tons. The Rockland county people receive nearly \$3,000 a day for their strawberries."

The New York Journal of Commerce remarks—
"The value of such an avenue of communication to the city, can scarcely be estimated. It gives us the good things of the country in cheapness and abundance."

On Thursday, the 24th, 52,499 baskets of strawberries were received in New York by the Erie Railroad.

Twenty-eight thousand quarts of milk per day is ten million; two hundred and twenty thousand quarts a year, which, at six cents a quart—the average price previous to the opening of the New York and Erie Railroad—amounts to \$613,900 per year; for an inferior article; but since the opening of this road the average price of good milk has been four cents—making an annual saving of \$204,400 to the people of the city on milk alone!! to say nothing of the strawberries."

If such advantages result to the city from one item of provisions, when the road is only one-fifth completed, what may not be anticipated when the

communication is opened to the lake and to the fruitful west? Who can estimate them? The economy of living and of transportation alone will be equal, in five years, to the entire cost of the road, even if it exceeds ten millions of dollars.—[Ed. R. R. Journal.]

Harlem Railroad.

The President and Directors of the New York and Harlem Railroad, accompanied by several members of the press, made a trip to Croton Falls on Monday, June 1, to celebrate the opening of their road to Somers. In spite of the unpleasant weather the trip was an interesting one. The road is now completed to Croton Falls, fifty-two miles from the City Hall terminus. The road from White Plains to Croton Falls is equal to any in the Union, being laid with the T rail. The Directors intend laying a double track from Harlem to Williams' Bridge, to which point the road will be immediately completed. At Williams' Bridge it will be intersected by the New Haven road. At present four trains, two for passengers and two for freight, pass over the road daily, one of each in the morning and one at evening. The amount of travel and freight is already considerable, and especially of produce brought in from Westchester and Orange counties.

The future prospects of the road are flattering, and passing as it does through a delightful country within four miles of Mayapee and the Croton Dam, two favorite summer resorts, it must induce a large share of travel. A fine dinner was served up for the jaunt at Croton Falls, and the whole company returned in the evening to the city, highly pleased with their trip and the capabilities of the road.

We are glad to know that our esteemed fellow-citizen, CHARLES PASHALL, Esq., has recently been elected President of the Company.

Atmospheric Railway.

"In another column," says the editor of the Mining Journal of May 29d, "will be found a description of Clarke and Varley's Resilient Atmospheric Railway Tube, with some remarks on the working of the experimental line of 450 feet of a 15 inch tube, now in operation daily near the Poplar Station on the London and Blackwall railway. Among several hundred gentlemen, connected with railways and scientific pursuits, who have already inspected this splendid model, we understand not a single objection of moment has been even raised against the principle—its merits being so evident to the casual observer, and affording the most convincing proofs, that whatever difficulties and objections the atmospheric principle has had to struggle against, it has arisen from an erroneous form of construction, and that the system under notice leaves nothing to be desired. To those who are aware of the continuous difficulties which have been, and are met with on the lines of railway which have been constructed on the atmospheric principle in continuing a vacuum, it will be surprising when we inform them that with only one valve of one air-pump at work, an exhaustion of half an inch of mercury, or about one-quarter of a pound pressure per inch on the piston is sufficient to start the carriage, with the passengers it contained, weighing nearly three tons; and that, on rising the incline of 1 in 60, the pressure never exceeds one pound per square inch. Of course, the speed was slow; but these experiments were made to show the extraordinary small amount of friction, and the absolute freedom from leakage which must exist in the tube, or such results could not be obtained. Indeed, although the patentees, and all who have watched the progress of the improvements

which have been gradually making in the construction of the continuous opening in the tube, during the past three years, expected the most favorable results, they have been completely astonished at the perfection which the model exhibits, now it is in full working order. The patentees invite the most searching investigation, and an inspection will well repay the trouble of a visit."

Seaboard and Roanoke Railroad.

The Norfolk Herald states that the Trustees of the Town of Portsmouth have purchased the Portsmouth and Roanoke Railroad from the Board of Public Works of Virginia, under the act passed at the last session of the Legislature, for the \$50,000, upon a credit of six years, and that they have sold the road to Messrs. Henshaw & Co., of Boston. The new company will immediately lay down T rails from Portsmouth to Weldon, and will also extend the road thirteen miles further in order to connect with the Raleigh and Gaston Railroad.

Niagara and Detroit Railroad.

In the Legislature of Canada last Friday evening, there was an animated discussion on this bill. For the second reading 34, against it 12—the members of the Government being all in the minority.

An Old Engine.

This "old fellow" holds his own well, and shows that he came of a good stock.

"There is now in full work, at the Tredegar Old Mill Iron Works, a steam engine which was erected by Boulton and Watt, upwards of 40 years ago, and is now nearly as good as ever. A few weeks ago it turned out, between one o'clock on a Monday morning and eleven o'clock on the following Saturday night, no less than 566 tons of rails, rolled and finished, and 289 tons of puddled bars—total, 855 tons."

Institutions for the Promotion of Science.

We have copied largely from the proceedings of a new institution for the promotion of mechanical science, recently established in Birmingham. The proceedings of this new society, or "Institution," are thus spoken of by the editor of the Mining Journal.

"The success of institutions, established for the promotion of scientific knowledge, is at all times highly gratifying to every one who takes an interest in the progress of human advancement, and the improvement of the arts to the wants and comforts of life. The report of the proceedings of the meeting of the members of the Institution of Mechanical Engineers, held at Birmingham on Monday last, will be read with interest, as recording the fact of its being now securely established, and bids fair to be, for the central metropolis of this engineering country, what the Institution of Civil Engineers is to London—patronised by Mr. Robert Stephenson, and supported by a host of influential parties in the midland counties. Several papers on important subjects were read at this, their second meeting, which augurs well for their future career—by Mr. Buckle, on the Use of Fan Blast, as applied to Manufacturing Purposes; another paper by Mr. Jones, of the Bridgewater Foundry, on the same subject, on which an interesting conversation ensued, relative to its application to the smelting of metals; one by Mr. J. Wilkinson, on the Economy arising from introducing Heated Air into the Boiler of the Steam Engine; and by Mr. Crawford, of Birmingham, on an improvement on Railway-carriage Breaks. The whole proceedings were highly satisfactory and encouraging, and the formation of the institution will give an opportunity to many engineers and manufacturers recording their improvements and inventions at the meetings in Birmingham, when it might be inconvenient to attend at the Institution of Civil Engineers in London. We heartily wish them every success."

THE MINING JOURNAL

AND AMERICAN RAILROAD GAZETTE.

A new candidate for public favor, with the above attractive title, recently made its appearance in New York, and a number was sent to us for our inspection, and "exchange," but before we had an opportunity of examining it—so interesting was it found—some one, interested in mining operations perhaps, availed themselves of a too common custom at hotels, and in editorial closets, and appropriated it to their own use, and thus compelled us to write to the editor for another copy which was duly received, but at a period too late for our last number. In size and appearance it very much resembles that excellent work—the "London Mining Journal." This, the first number, is of course made up with much care. Its introductory article is well written, and its correspondence and selections are extensive and interesting; and it bids fair to become a useful laborer in the cause. We therefore give to it the right hand of fellowship, and wish it, editor, proprietor and mining friends, God-speed.

That our readers may judge of its objects and claims, we give its leading article entire, and make several other selections from it, and now give notice that we shall make free use of its contents when we find them in our line and to our mind.

The editor, Mr. John E. Grant, says in his introductory article that—"In presenting the first number of THE MINING JOURNAL to the public, we shall make a few remarks to enable our readers to judge for themselves of the merits of the enterprise, and the value and usefulness of the paper. We intend and hope to make it useful to our readers and profitable to ourselves. We propose to make no promises we cannot perform, nor awaken expectations we cannot satisfy. Aware that we are entering upon the discharge of a difficult and laborious duty, we must bespeak the kind indulgence of our patrons, tendering to them the assurance that our efforts shall ever be directed to make this Journal all that we herein propose to make it, and to add to its usefulness, from time to time, as larger experience and more thorough knowledge of the wants of the mining and kindred interests of the country shall enable us to do it."

"The paper will be devoted to the subject of mines and mining metals and minerals, and in other respects conducted upon the plan, (so far as we are able to adopt it,) of the celebrated 'Mining Journal and Railroad Gazette,' of London. Attention, of course, will be given to the smelting and manufacture of minerals and metals when raised from the mines. All mines, whether of iron, lead, copper, silver, gold, coal, etc., will receive attention; the various modes of smelting metals, or working or manufacturing them, and the most approved methods of working, alloying, or using them by chemical or other means used in the arts, will be treated of in our columns by ourselves and others, with care and impartiality."

"In former times, and in a different state of society from that which now exists, when the whole circle of the useful arts was within the geographical limits of less than one-half of the eastern continent, and animal power was used for most of the purposes of transportation, but a small comparative amount of metals was required for the uses of human life. The discovery of this continent, the introduction of a more intelligent and higher civilization, the discovery of steam power, and the various inventions and improvements which have followed, upon land and sea, have produced wonderful changes in the business of the world, and extended widely

the uses of the metals in the service of mankind. In iron and lead, the reduced price shows that the supply has kept pace with the demand, while in copper the advanced and still advancing price gives evidence that the demand has increased upon the supply. Many of our citizens will recollect the time when most, if not all the iron and lead used in the United States was imported from other countries, and with what suspicion and fear our citizens embarked in any enterprise which had for its object the mining and smelting of those metals. The wonderful discoveries of lead on the Upper Mississippi, and the immense quantities mined and manufactured, have astonished all who have given attention to the subject, either in Europe or America. The immense deposits of iron ore, in various parts of the United States, and the discoveries continually being made, are not less surprising; and if not so much now the subject of remark as formerly, it is because the public ear has become so familiar with the reports of new discoveries that they have lost their public interest. The fact of a discovery of a mountain of iron ore, an ore-bed covering thousands of acres, or a coal field extending scores of miles, now creates but little attention and no excitement.

"The discovery of the immense deposits of copper in the region of country bordering on Lake Superior at first attracted some attention, and afterwards created considerable excitement; but the excitement over, the fact of their existence was added to the many evidences of the great mineral wealth of this country. The development of these mines is left now to private enterprise and ingenuity, and promises profitable rewards. To aid that portion of our fellow citizens who are, or who may be hereafter engaged in exploring for, locating and working these mines, we shall place before them full and correct information as to the discoveries of new mines, the annual yield of those discovered, the improvements made from time to time in tools and machinery used in the mines, the discoveries of new, and the improvements of old, methods of smelting and manufacturing the metal, and the new purposes to which the metal has been or can be applied.

"It is our intention to give considerable space in the Journal to the construction of railroads and steam engines, and other machinery of which metals may form any considerable part.

"The information we are able to obtain, from time to time, from the European mines, the value of ores and metals there, the value of stocks, reports from mining companies and mines, when the same are made public, will be given; and in general the diffusion of such correct information as may be thought useful or instructive to those engaged in mining or connected with mining interests, will be the object of THE MINING JOURNAL AND AMERICAN RAILROAD GAZETTE."

Night Telegraph.

At a meeting of the Scottish Society of Arts, on the 26th of April, a communication was read by Mr. J. Stewart Hepburn in relation to "Night Telegraphs by colored lights."

This telegraph consists in the employment of various combinations of the only two colors, red and white, which are distinctly visible at considerable distances. This is effected by the use of a lamp, enclosed in a hexagonal screen, which revolves horizontally on pivots; four of the compartments being opaque, and two furnished with lenses, one red, the other colorless. By the turning of the screen the light can either be masked or shown of a red or white color as the particular combination may require. Three such lamps are hung

on pivots on an arm or beam 15 or 20 feet in length, turning vertically on its centre on an upright post, and made to assume four definite positions, horizontal, vertical, and diagonal, rising from the left or falling from the left. The different positions of this arm, together with the varieties in color and order given to the lights by this construction of the lamps, afford at least fifty distinct combinations, to which numbers, or the letters of the alphabet, and arbitrary significations adapted to the particular uses of the telegraph, may be assigned.

At the same meeting was also read a "description of a new method of overcoming an Incline of 1 foot in 12, with a new Locomotive Reversing Steam Engine." By Mr. DANIEL ERSKINE.

In addition to the small wheels keyed on the axle outside of the usual large wheels of locomotives, and connected by connecting rods, Mr. Erskine has a toothed pinion on each side of the engine, dropping down between the flange of the small wheels and the large wheels, which, on the locomotive coming to a steep incline, say 1 foot in 12, works into strong pins or bolts, fixed on the inside of the raised rail. The engine and carriages all the while running on the small wheels, by which their whole weight is borne, and the large wheels acting as fly-wheels, leaving the toothed pinions nothing to do but to work in gear with the pins or bolts, thereby effectually preventing slipping. It was shown, by a beautiful working locomotive of about 9 lb. weight, made by Mr. Erskine, and fitted with his reversing pivot valve, that by this means it easily ascended an incline of 1 foot in 10; and on an incline of 1 in 16, the small wheels themselves, without the toothed pinion, easily accomplished the ascent; whereas the engine could not attempt the ascent with its ordinary larger wheels. It was stated that this is not the first time a rack and pinion has been proposed on the inclines of railways, but that it has never been proposed in the way now done by Mr. Erskine, by whose method the power is so vastly increased by being brought to act so near to the centre of the wheel.

Atlantic Screw Propeller.

At the meeting of the Institution of Civil Engineers, London, May 18, a paper was read by Mr. J. Grantham, entitled "an account of the Sarah Sands, and other Iron Vessels, with direct-acting Auxiliary engines and screw-propellers."

The object of the paper was to show, that a propeller might be constructed of such dimensions that the number of revolutions it would require to make in order to obtain a high velocity would not much exceed that of the ordinary paddle-wheel, and that hence the usual marine condensing engine might be applied direct to the propeller shaft, without the intervention of a secondary motion. It appeared from the statements in the paper, that this opinion was found to be correct, and that Woodcroft's expanding pitch screw-propeller was the best form that had hitherto been employed. In a paper read to the Institution, upwards of three years since, Mr. Grantham gave his views on this subject, and several vessels had been since built—the results of the trials of which were communi-

cated to the meeting. The principal of these were the *Emerald* and *Diamond*, three-masted steamers, of 400 tons, and 60 horse power; the *Nautilus*, of the same dimensions; the *Antelope*, of 600 tons, and 100 horse power; and the *Sarah Sands*, of 1000 tons, and 180 horse power. Drawings of these vessels were exhibited to the meeting. The capabilities and performance of these vessels were described in the paper, but particular notice was taken of the last named vessel, which had performed a most successful voyage to New York during bad weather, and adverse winds. The passages made by the ordinary New York liners, which were out at the same time, were very long, averaging 48 days each, and the Boston and Liverpool steamers were much longer than usual on their passage. The *Sarah Sands* used her steam about 17 days, and sailed the remainder, making her voyage in 20 days 10 hours. On her arrival she had about enough fuel remaining for four days' steaming. The paper did not enter minutely into the particulars of the screw itself, as it was considered that too much attention had been given to that branch of the subject to the exclusion of the consideration of the plans for working it, which, after all, had been the stumbling-block to the general adoption of the system. It was necessary with the screw, the theory of which, as a propeller, was so little understood, to proceed with experiments perseveringly in one direction, as variations in the results were frequently attributed to causes which really did not exist. After describing several interesting details, the paper concluded by expressing a desire that engineers should examine the drawings of the system laid before the meeting, and endeavor to add to the stock of information already obtained.

After the paper was read, Mr. Grantham added some facts which he had recently gathered, and which strongly confirmed what had been stated. The *Diamond* had recently made a very rapid passage to Madeira, deeply laden; but, during the whole passage, the engines maintained a very moderate speed, and quite removed the impression that under such circumstances they would run too fast from their being connected directly to the screw.

An account of the last successful voyage of the *Sarah Sands* was also given, and it appeared that, in spite of most severe gales, which had driven back almost all other vessels, her passage had been made in the most satisfactory manner. In the discussion which followed, several engineers of eminence expressed themselves much pleased with the facts brought forward in the paper, and perfectly concurred with the views put forth. The principle of the following current of the ship, which had a material influence in increasing the efficiency of the screw, was alluded to, and a conviction was expressed that the screw would eventually supersede all other means of propelling vessels on long voyages.

An account was given also of the auxiliary screw steamers that ply between London and Rotterdam, and some interesting facts

were given of the power which these vessels possessed of working to windward in bad weather. The subject was closed by a discussion upon several points that had been started, relative to the size of the screw, the mode of disengaging it, and the prospects which were held out of the final success of the principle.

Mining on Lake Superior.

We find the following remarks upon this subject in the Mining Journal recently established in New York. They are well worthy of attention from those who have a desire to embark in the business.

The remarkable discoveries made in the section of country in the vicinity of Lake Superior, has excited a considerable share of the attention of those engaged in mining. There has been, no doubt, much exaggeration in many of the statements made, in relation to the discoveries, and the speculation in mining stocks was pushed to an extent unwarranted by the actual state of affairs. In the fervor of excitement, when every returning visitor to the country brought information of new and astonishing discoveries of veins of pure copper, of great width and of unknown length with here and there rich specimens of pure native silver, suggesting the promise of immense deposits of that metal, it was not strange that the sober second thought idea as to the correctness of the reports and the title to the land, should be overlooked for the moment. Nor was it strange that when the excitement was over, and the fact established that without the action of congress, no title could be obtained to the lands, that the depression should be as great as the excitement had been high. Time and more numerous thorough examinations have now established the fact, that in all human probability, the Lake Superior region of country, including the north and south shores, far exceeds in richness and mineral value, any section of equal extent in any other country. The laws passed at the last session of congress, ordering the sale of mineral lands on Lake Superior, and giving pre-emption right to actual occupants, has placed the subject in a different light, and in a tangible shape. Investments can now be made with security, so far as the title to the land is concerned, and the capitalist who invests his money, and is successful in doing it upon a good mine, can rest secure in the certainty that whatever he may find, be it ever so valuable, will be his own. The facilities for transportation and travel have diminished, if not the distance, the time necessary to overcome the distance, so that the Lake Superior country may be said to be almost at our doors.

By the arrangements now made, and in progress, the passage from New York to Copper Harbor, can be made in from five to six days, at an expense but little exceeding thirty dollars; and contracts for the delivery of ore, in any quantity, at New York or Boston, from any point on the lake shore, below the mouth of the Ontonagon, can be made at from fifteen to twenty dollars per ton. We think we are safe in saying that, taking into consideration the extraordinary salubrity of the climate—the immediate vicinity of the mines to water communication—the richness

of the veins, and their proximity to the surface—the position of many of the mines in elevated situation, convenient for draining—the large amount of wood and timber suitable for coal and fuel, in the immediate vicinity of the mines—the Lake Superior country offers greater facilities for a profitable working of mines than can be held out by any other country on the globe. The expense of transporting, from points on Lakes Erie and Michigan, the provisions necessary for the workmen at the mines, the increased prices of labor, and the extra expenses incident to all new undertakings, will no doubt operate as a serious drawback upon the profits for a few years; but as the country in the vicinity of the mines becomes settled by an agricultural population, and the knowledge of the mines has become extended so as to induce immigration from foreign miners, these obstacles will be overcome.

But, after all, we do not intend to urge our readers to embark with a rush in mining in the Lake Superior country. The business is a new one to most of those engaged in it, and in all cases experience is the best and safest guide. We would suggest, then, to those engaged in mining, the expediency of moving, in the first instance, with care, employing but a small force at a time until a thorough examination of the position and value of the veins and ores contained in them, has determined the best point to drive the drifts or sink the shafts. To those who propose to invest in the mines, we would suggest the policy of dividing the investments among several mines, always exercising due care to ascertain the present prospects and value of each mine.

The management of the mine, too, is a matter of great moment, as the mere fact of having a good mine will be of but little importance, if the labor is misdirected, and the money lost by improper, careless, or bad management. We suggest a division of the investments among several mines, from the belief that discoveries of silver thus far, go to warrant the expectation that deeper explorations will result in the discovery of rich deposits of silver. This may not, and probably will not, occur in all the mines, but is very likely to happen in some; and as most of the mines have more or less silver in them, it is as likely to occur in one mine as in another. By a division of interest among several mines, the chance of obtaining a silver mine is increased.

The money must be made by a skillful working of the mines, and by raising the greatest amount of metal with the least possible expense; but a large amount of money will be made, incidentally, by the rise of stocks, caused by the increase of value in the mine. As a general rule, then, the purchase of stocks in mines just opening, and when the prices will be low, although attended with some more risk, will no doubt be as good an operation as the investment, at high prices, in older mines. Even in the present crude state of knowledge upon the subject, it is not difficult to determine as to the promise of a vein, and the purchaser of stocks in any

mine should be correctly informed as to the appearance of the vein.

Gun Cotton for Blasting.

This new article seems to be attracting much attention. Numerous experiments, in comparison with gunpowder, have been made for blasting in tunnels and on other works, which should be understood by railway engineers and contractors—therefore we extract freely from our English Journals in relation to it. The following is from the Railway Chronicle of 29th May.

On the 20th of May, Mr. Wheeler, as representative of the Messrs. Hall, gunpowder manufacturers, and proprietors of the patent for Schonbein gun cotton, attended in Birmingham for the purpose of testing the comparative powers of gun powder and gun cotton in the mining operations of the Birmingham, Wolverhampton and Stour Valley required for the tunnel at present in progress under the town. The following is a brief description of the state of the tunnel and of the result of the experiments:

The length of the tunnel when completed will be about 850 yards, extending from Suffolk street to the canal, at the Crescent, all through the new red sandstone. At the Suffolk street end, about 40 yards have been completed, and two lengths have been got out by open cutting. In the excavation of this open cutting, one series of experiments was made. At a distance of a third of the length of the tunnel from this end, a shaft has been sunk in the old canal wharf, as also an air shaft, and at this shaft about 100 yards have been completed. Another shaft has been sunk at Bingley, and a heading had been commenced, but in consequence of complaints from parties in the neighborhood that their property was injured by the vibration caused by the blasting, the directors had stopped the operations, to try what other means less objectionable could be adopted. The first experiment was tried at Bingley, where two holes of equal size were driven, and charged—one with eight ounces of gun cotton, and the other with fifty ounces of gunpowder. The effect of the two was nearly alike, but the noise and vibration from the gun cotton were far less than from the powder. At the open cutting two experiments were tried; two holes, each 5 feet 6 inches deep, were loaded—one with ten ounces of cotton, and one with fifty ounces of powder. In this case, the noise and vibration were less from the cotton, but the ground displaced by the powder much greater than by the cotton.

Again; two holes, each 5 feet 6 in. deep, were charged—one with fifteen ounces of cotton, and one with sixty-three ounces of powder; and in this case the cotton displaced a much greater amount of ground than the powder. It should be remarked, that at the open cutting, the rock being so near the surface, is of a much less firm character than at the other points, where the rock is 50 or 60 feet below the surface. In the canal wharf the holes were 4 feet deep for the cotton and 5 feet 3 inches deep for the powder, and the charges sixty-three ounces of powder and thirteen of cotton. The cotton displaced less than the powder. In all cases the vibration

and noise from the cotton was less than from the powder, with this additional advantage, that as no smoke resulted from the cotton the miners were able to resume their work immediately after the shot, which is seldom the case with powder, especially in dull weather, such as the last week here, during which they were obliged to remain out of the tunnel for one day, in consequence of the accumulation below, although there is an air shaft in communication with their work. From the above experiments it was considered that in such ground as this tunnel goes through, the same work might be done by using one-fifth part of the weight of gunpowder—that is, that one ton of gun cotton would perform the work of five tons of powder. Now, powder costs £44 per ton, and gun cotton 3s. a pound or £336 per ton, leaving a difference in favor of powder of £116 in every five tons of powder; and it is a matter to be decided only by further experiments, whether the absence of smoke and the diminished amount of noise and vibration are worth purchasing at this increase of price. It is evident, however, that the only true means of testing the relative efficiency of the two would be to get out one complete length, through the same stuff, with each, and compare the amount of power and of cotton required. The comparative expense of the two would then be known most accurately.

Institution of Mechanical Engineers at Birmingham.

This "Institution" appears to direct its attention particularly to mechanical improvements. At their meeting on the 28th of April, "in the absence of George Stephenson, Esq., President, Mr. McConnell was called to the chair, and the minutes of the last meeting having been read by the Secretary, (Mr. Archibald Slate,)

The Chairman rose and said, the present meeting was one of the four ordinary meetings provided by the rules of the Institution, and required to be held on the fourth Wednesday in April. Since the last meeting, the Council had met on several occasions, and after discussing various subjects of interest to the Institution, they invited the London and Manchester branches of the body to meet them, consider their proceedings, and confirm them if approved of. The gentlemen from Manchester accordingly attended a meeting of the Council, on the 21st of April, confirmed the past minutes of Council, and suggested some further improvements in the management of the Institution. The business of the present meeting was to confirm the minutes of the last general meeting, to receive new members and communications, and consult as to future operations; and here, perhaps, before they proceeded further, he might be allowed to say he had a very agreeable piece of intelligence to communicate, which he was sure would be very gratefully received by the meeting. It was the announcement of a handsome donation of 100*l.* to the Institution, by their worthy and highly esteemed President, to whom he begged leave to propose a vote of thanks for this additional mark of his estimation of the Institution, which was unanimously assented to.

The Chairman stated that the Council was of opinion that the members ought at once to proceed to work and supply information on useful subjects; and, in order to make a commencement, they had forwarded the following suggestions to each member of the institution:—

- "1. The best form of railway axles and wheels.
- "2. The best description of engine and mill for manufacturing iron.
- "3. The best form of barker mill or turbine.
- "4. The best form of luggage engine for narrow gauge.
- "5. The most economical stationary steam engine, with coal at 6s., 12s., and 24s. per ton, taken in a commercial point of view.
- "6. The best form of air-pump valves.
- "7. The best high pressure marine boiler.
- "8. The best description of pumping engine for the thick coal district of Staffordshire.
- "9. The flow of water through straight mains and curves."

The following papers were then read:—

1. "*Apparatus to be applied to railway carriages for lessening the dangerous effects of collision on railways.*" By Mr. E. CHESHIRE.

This method has been described in the Journal for September last, p. 285, it simply consists in applying beneath all the length of the body of each passenger and other carriage of every train an inflexible unyielding rod, which is termed a "safety-buffer," of wrought iron, and a tube plugged with wood, supported in suitable bearing-sockets beneath the framework of the carriage, at the middle of the breadth thereof, and left loose in those sockets. The safety-buffer terminates at each end with an enlarged head-like those of ordinary buffers, and the heads of the safety-buffer of each carriage correspond to the like heads of the safety-buffer of the preceding and following carriages. When the usual coupling links are screwed up to bring the ordinary buffer heads of the several carriages into elastic contact one with another, as is usual, there will be a vacant space between the safety-buffer head of each carriage and that of the next adjacent carriage, varying from three to six inches, more or less, according to circumstances, and the safety-buffers will not have any effect or operation in the ordinary course of travelling, but only in case of a collision. The safety-buffers in the van, at the hinder end of the train, and in the tender at the front end, are not to extend throughout the whole length of those carriages, and need not have any endway motion, but may be firmly fastened to the framework of those carriages, or they may be applied against strong elliptical springs, placed end to end for expending some of the force of the collision. The van is to be lower than the passenger and other carriages, in order that its centre of gravity may be nearer to the level of the rails. The van at the hinder end of the train is to have its ordinary buffers with easy yielding springs, which, with the same force applied to them, will allow those buffers to move through a much

greater space in respect to the van than the ordinary buffers of the carriages of the train, so that, in case of a collision from behind, the ordinary buffers of the van being so yielding, they will not act with much force against the corresponding buffers of the hindmost carriage of the train.

Remarks.—Mr. W. ROBINSON, of London, said, it might be advanced against the proposed improvement, that every rod being six inches less in length than the side buffer, would lose six inches in every carriage; consequently, supposing a train to be composed of, say 50 carriages, it would require 25 feet for the stroke of the last buffer. It might also be objected that the rod would double up; four or six inches in diameter was not sufficient to take the amount of force imparted by the collision. He would estimate that it would require 13 feet diameter to oppose the force of the shock imparted to it.

Mr. CHESHIRE replied, that the momentum was communicated to the first rod, and through each individual rod to the last instantaneously, and through it to the hinder van, just as in the case of a number of billiard balls placed in a row. When the first was struck, the last was driven away with all the impetus communicated to the first, leaving the intermediate balls perfectly at rest.

A member suggested that it would require 300 tons to double up a rod four inches in diameter.

Mr. CHESHIRE—I take it at that calculation, and say, consequently, supposing the momentum of the collision to be greater than that, it was quite evident that 300 tons must be taken from the amount of collision imparted to the train and expended upon the van behind the train. As the stroke of the side buffer was 13 inches, it was quite clear six inches might be allowed for the stroke of the centre buffer without any injury to the passenger carriage; consequently, if 25 feet were lost in the centre buffer in a train of 50 carriages, 54 feet would be gained by the stroke of the side buffer, having a surplus of 29 feet.

2. "*Disconnecting Coupling.*"—Mr. JOHNSON, locomotive superintendent of the Manchester and Leeds Railway, produced a model of an invention for disconnecting the carriages from the engine, in the event of an obstruction on the line, or any other accident which would cause the engine to run off the rails, by a self-acting disconnecting coupling chain, which he proposed to apply between the tender and the luggage van. It was exceedingly simple and inexpensive, and might be applied to any train with a slight alteration of the present coupling crook of the luggage van or carriages. In case the engine or tender got off the rails from any cause whatever, regardless of the speed, the engine or tender would be immediately disengaged from the train, allowing the latter to remain on the line perfectly uninjured, and thereby accomplishing the object for which it was intended. He had had a working model 12 months, and during that time tried it repeatedly, and could now speak confidently of its merits.

the company.....\$417,075 55
The iron now laid thereon is the flat bar and will be useless, and therefore will be sold. It is hoped that there may be derived from the sale of it..... 80,000 00

Leaving the sum of.....\$337,075 55

Which has been expended for the cost of the wood structure, which in addition to a large annual amount for repairs, will be practically worn out, sunk and gone when the new structure is laid and used. The new structure, it is supposed, will cost about the same as the former, towards which, it is hoped, the old iron will pay as above, \$80,000, leaving the sum of about 300,000 to be raised by the company on its credit.

This will, when paid, reimburse the capital of the company for the equivalent amount which has been appropriated to the worn out structure. In addition to the cost of the new structure, there will be required a considerable sum for new engines, cars, etc. The demand upon the company for the transportation of property at the close of the canal, has entirely exceeded its capacity to do this business. Property destined for sale in the eastern markets in large quantities, was stopped at most points upon the line of railroad contiguous to the canal. Being practically confined to the winter months in this branch of business, it cannot be expected that the company could provide a supply of cars for this sudden and extraordinary demand when they must stand idle and go to waste during two-thirds of the year.

When the road shall be relaid with the proposed iron rail, the public will require that the trains shall be run with increased speed. In relation to this subject, it is deemed proper to refer to the following suggestions contained in the report of this company made last year:

"Very great embarrassment is experienced from the fact, that cattle are allowed to run at large, and to impede and so often delay the trains as at present. It is a serious matter, and unless more care shall be bestowed by the owners in restraining them, either at their own suggestion, or in pursuance of some proper law to be passed, it will be found very difficult to make good time upon this line. A part of our business must always be done in the night, and it is then that we experience the great hazard. The trains are frequently thrown off by them, and the danger to the persons in charge and to the passengers is often imminent. The owners always insist upon pay for their animals destroyed, without reflecting upon the great damage that they cause to the property of the company, and the more fearful injury that might ensue to passengers. If the owners will not take care of them it is impossible to keep them off. In Massachusetts much less difficulty in this respect is experienced, for there, it is believed, a penalty is incurred by the owner of domestic animals that go upon the railroad. Our business is conducted with all possible care in this respect, and the engine men suitably feel the risk of life or limb (which to them is almost as important) that they incur from the growing evil.

"A very proper law in this State has guarded the public and the company against direct wanton injury to the trains by individuals. It is submitted that negligence in allowing animals to run upon the railroads should be prevented by some suitable restraints."

The following table shows the whole receipts of the company from all sources, and the expenses and disbursements actually paid each year.

Years.	EXPENSES.					RECEIPTS.					Net gain over all expenses.
	Transportation.	Construction.	Total.	Passengers.	Freight.	Mail.	Miscellaneous.	Total.			
1839	\$34,438 02	\$25,393 45	\$59,831 47	\$108,185 29	\$1,636 29	\$11,350 47	\$3,376 16	\$122,185 29	\$82,353 32		
1840	66,526 65	44,285 71	110,812 36	178,509 57	2,341 16	5,317 63	1,025 62	194,872 49	84,060 13		
1841	66,696 22	42,928 00	109,624 22	190,929 32	1,620 01	9,275 00	3,315 31	199,513 73	89,889 51		
1842	59,970 50	38,896 94	98,867 44	155,224 95	2,119 82	11,598 75	2,714 11	169,435 27	70,567 83		
1843	66,796 44	7,413 31	74,209 75	147,353 40	3,457 09	6,956 25	2,620 74	163,786 08	89,576 33		
1844	80,824 53	35,678 42	116,502 95	181,647 34	12,947 50	6,956 85	1,951 70	194,681 42	78,178 47		
1845	140,294 59	975 00	141,269 59	182,484 78	19,623 50	6,289 75	2,015 41	204,340 23	63,070 64		
1846	159,078 33	12,119 73	171,198 06	222,708 56	\$43,745 37	\$57,744 10	\$17,019 05	257,637 23	86,446 16		
		\$207,683 56	\$868,308 84	\$1,387,943 31				\$1,506,451 73	\$624,142 89		

The following is the tabular statement:
Tabular statement relative to the Syracuse and Utica Railroad Company, made to the Secretary of State, agreeable to a resolution of the Assembly, passed February 2d, 1843, showing the business of the road for 1846.
Length of the road 53 miles.
Cost of construction.....\$1,128,940 24
Less amount charged to account "depreciation property," for reduced value of engines, cars, 30,000 00
\$1,098,940 24

Received from 103,798¹ through passengers..... 307,597 00
Received from 51,481 way passengers..... 22,111 56
Received from transportation of freight, 19,623 50
Received from transportation of U. S. mail..... 6,289 75
Received from miscellaneous sources..... 2,015 41
Expenses for repairing, operating, and running the road, including the amount paid for debt and new cars.....\$124,932 48
Amount paid for new track 38,241 13
do permanent fixtures..... 8,017 56

Expended on account of construction for land..... 12,112 73
Dividend paid February 15..... 40,000 00
do August 15..... 40,000 00

Number of locomotives, 9.
An individual interest in 42 eight wheeled passenger cars, 10 eight wheeled emigrant, 14 eight wheeled baggage, 4 eight wheeled baggage and mail, owned by the railroads between Albany and Rochester.
Number of freight cars, 40; number of passenger cars, 9; machine shop, 1. Average number of men employed by the company, 120.
Number of miles run by passenger trains..... 95,000
do freight and other trains..... 35,000

130,000
JOHN WILKINSON, President.

Syracuse, January 23d, 1847.

STATE OF NEW YORK, ss.

Onondaga county, ss.

John Wilkinson, president of the Syracuse and Utica Railroad Company, being duly sworn, saith, that the foregoing statements of the receipts, expenditures and condition of the Syracuse and Utica Railroad, are just and true according to the best of his knowledge, information and belief.

JOHN WILKINSON.

Subscribed and sworn before me, }
this 23d day of January, 1847. }

R. WOOLWORTH,

Justice of the Peace.

REPORT OF THE AUBURN AND SYRACUSE RAILROAD COMPANY.

Hon. N. S. BENTON, Secretary of State.

Sir—Herewith is transmitted the statement of the Auburn and Syracuse Railroad Company, pursuant to a resolution of the Assembly, passed February 2, 1843, for the year ending December 31, 1847.

1. Length of road, 26 miles.
2. Cost of construction as stated to January 1, 1846.....\$675,239 03
3. Expended on construction in 1846..... 3,247 50
Balance of interest account to Jan. 1, 1846.....\$93,034 23
Expended for interest in 1846 12,003 15

105,037 38

Total to January 1, 1847.....\$784,223 90

4. Income from passengers.....\$98,051 71
5. do freight..... 16,886 32
6. do U. S. Mail..... 4,050 00
do incidental..... 50 00

119,038 03

7. Number of through passengers.....96,675¹

8. Number of way passengers..... 9,134

105,809¹

9. Receipts from passengers.....\$98,051 71

10. Expenses for repairing and running road..... 46,164 08

11. Amount of dividends..... 32,000 00

12. Number of locomotive engines..... 4

13. Number of passenger, mail and baggage cars as follows: ²/₃ parts of all the passenger, baggage and mail cars owned as common stock between Albany and Rochester, being 52 eight wheeled passenger cars and eighteen eight wheeled baggage cars.

14. Number of freight cars (4 eight wheeled, 18 four wheeled)..... 22

15. Number of machine shops, 1
 16. Average number of men employed, 56
 17. Number of miles run by passenger, freight, and other trains, 61,660

Cayuga County, ss.

Thomas Y. How, Jr., Director and Treasurer, and Elijah P. Williams, Superintendent of the Auburn and Rochester Railroad Company being duly sworn, doth depose and say, that the above statement is correct and true according to the best of their knowledge and belief.

THOMAS Y. HOW, JR.

ELIJAH P. WILLIAMS.

Sworn this 1st day of February, 1847, before me,

A. C. MONGER,

Justice of the Peace,

Cayuga county.

REPORT OF THE AUBURN AND ROCHESTER RAILROAD COMPANY.

Hon. N. S. BENTON, Secretary of State.

Sir—The president, directors and company of the Auburn and Rochester Railroad submit the following report of the business of the road for the year 1846, in conformity to a resolution of the Assembly of the State of New York, passed February 2d, 1843. The length of the road is 78 miles.

The cost of construction to 1st of Jan.,

1846, was, \$1,833,045 18

Expended on construction in 1846, 32,999 28

Total cost of construction to 1st Jan.,

1847, is, \$1,865,044 46

Received from through passengers, \$169,006 98

do way do, 84,066 23

do freight, 20,201 76

do U. S. mail and other

sources, 16,895 58

Total income for the year 1846, \$290,170 55

Expended for repairs and running road, \$110,353 24

Dividend paid 1st February, 1846, \$56,000 00

do 1st August, 1846, 56,000 00

..... \$112,000 00

Number of through passengers, 62,218

do way do, 80,037

Total number of passengers, 142,255

Number of miles run by passenger

trains, 135,563

Number of miles run by freight trains, 29,102

do do all other do, 24,580

Total number of miles run, 189,245

Number of locomotives, 10

Number of eight wheel freight cars, 16

Number of four wheel do, 12

Number of passenger, baggage and mail cars,

viz: of the following, owned in company with

the line of railroads between Rochester and Albany,

viz:

Eight wheel passenger cars, 42

do emigrant cars, 10

do baggage cars, 14

do baggage and mail cars, 4

Total in passenger business, 70

Number of horses, 4

Number of machine shops, 2

Average number of men in the employ of the

company:

Carpenters, 21

Blacksmiths, 10

Machinists, 23

Laborers, 106

All others, 30

Total number, 190

All which is respectfully submitted,

CHAS. SEYMOUR,

Sec'y and Treas. A. & R. R. Co.

Ontario county, ss.

I, Charles Seymour, secretary and treasurer of the

Auburn and Rochester Railroad Company, being

duly sworn, depose and say, that the foregoing state-

ment is true according to the best of my knowledge and belief.

CHAS. SEYMOUR,

Sec'y and Treas. A. & R. R. Co.

Subscribed and sworn before me, this 13th day of January, 1847.

S. C. WHITE, Justice of the Peace

REPORT OF THE TONAWANDA RAILROAD COMPANY.

In compliance with the resolution of the Honorable the Assembly, passed February 2, 1843, the Tonawanda Railroad Company would report:

1. The length of the railroad of this company in

operation is estimated at 43½ miles.

2. The cost of construction of the railroad of this

company is as follows:

Amount charged to construction up to

January 1, 1846, as per last report, \$751,053 28

Expended for construction in 1846, 2,501 91

Whole cost of construction, \$753,555 19

3. The income for the year 1846 from passengers, from freights, and from all other sources, was as follows:

From passengers, \$111,583 09

do freights, 23,779 97

do U. S. mail, 6,347 25

do storage, 2,107 89

..... \$143,818 20

Sinking fund with revenue

from N. Y. Life Insurance

and Trust Co., \$5,333 33

From sale of iron rails and

iron, 3,161 65

do car sold, 300 00

do interest received, 447 91

..... \$9,242 89

Total, \$153,061 09

4. Number of through and way passengers in '46.

Number of through pas-

sengers, 65,359½ paying \$93,604 08

Number of way passen-

gers, 27,028 do 17,216 94

4th of July and state fair do 762 07

Total, 92,387½ \$111,583 09

5. Expenses for construction and for repairs, and

for running the road, etc.

Paid for construction in 1846, \$2,501 91

do repairs and running the road, 45,184 49

Paid in purchasing debts of the

company with interest thereon, 33,566 19

Paid interest on mortgages and other

debts, 1,234 03

Paid interest and sinking fund on loan

of State credit, 7,047 82

Total, \$89,534 44

6. The amount of dividends paid July

1, 1846, and January 1, 1847, was, \$56,300 00

7. Number of locomotives, etc.

6 locomotives.

5 eight wheel passenger cars.

3 four wheel do

7 eight wheel freight and baggage cars.

40 four wheel freight cars.

1 mail car.

1 engine house.

1 machine shop.

1 carpenter shop.

2 horses.

8. The average number of men in the employ-

ment of the company in 1846, was 70.

9. The number of miles run by passenger

trains was, 59,622

do do by freight trains, 11,084

F. WHITTLESEY, Secretary.

Rochester, January 16, 1847.

State of New York, Monroe county, ss.

Frederick Whittlesey and Lewis Brooks, of the city of Rochester, being duly sworn, severally depose and say, first: The said Frederick Whittlesey saith that he is secretary of and director in the Tonawanda Railroad company. Second: The said Lewis Brooks saith that he is treasurer of and director in said company; and they each for themselves say, that from the examination of the books of said company, and from their knowledge of the affairs of the said company, and from the accounts kept in the different offices of the said company,

they have compiled the above report, and believe that the same is correct and true.

FREDERICK WHITTLESEY.

LEWIS BROOKS.

Sworn and subscribed, this 16th day of January, 1847, before me.

B. SCHAEFFEL,

Commissioner of Deeds.

ATTICA AND BUFFALO RAILROAD CO.

In compliance with a resolution of the Assembly passed February 2, 1843, the Attica and Buffalo railroad company submit the following report for the year 1846:

Length of the Attica and Buffalo railroad, 36 miles

and 26 chains.

Length of branches about 50 chains.

The company own and have in use,

4 long passenger cars.

2 short do.

5 long freight cars.

1 mail and baggage car.

6 short freight and baggage cars.

24 short wood cars.

4 locomotive engines.

1 machine shop.

The average number of men, 26.

The cost of construction of the road is as follows:

Amount charged to construction to January 1, 1846,

[correcting] the last report, \$303,257 89

Amount charged in 1846 to same acct., 3,446 63

Total cost of construction, 307,704 52

Paid for cars and engines up to Janua-

ry 1, 1846, 38,392 53

Paid for cars and engines in 1846, 9,711 80

Total cost of engines and cars, 48,104 33

The income of the road for the year 1846 from all

sources, was as follows:

Income from passengers, \$72,405 55

" freight, 8,185 64

" U. S. Mail, 4,800 00

" sale of stock, 877 50

" miscellaneous, 925 37

Total income from all sources, 86,494 06

No. through passengers in '46, 77,517 fare 67,793 95

" " " 10,116 " 4,611 60

Total, 87,613 72,405 55

The expenses for construction in 1846, as

before stated, 3,446 63

For engines and cars, 9,711 80

Total running expenses, 33,564 98

..... 47,723 41

A dividend of 4 per ct. paid Feb. 1, '46, 13,546 00

do 5 do. Aug. do. 16,950 00

..... \$30,496 00

The number of miles run by passenger trains, 54,261

" " freight " 10,391

J. O. PUTNAM,

Sec. and Treas. A. and B. R. Co.

Buffalo, January 25, 1847.

Erie County, ss.

James O. Putnam, of the city of Buffalo, being duly sworn, deposes and says, that he is the secretary and treasurer of the Attica and Buffalo railroad company, that he has prepared the foregoing statement from the books of said company, and that it is correct according to the best of his knowledge and belief.

J. O. PUTNAM.

Sworn before me this 1st day of February, 1847.

T. BURWELL,

Judge of Erie County.

BUFFALO AND NIAGARA FALLS RAILROAD COMPANY.

To the Hon. the SECRETARY of the State of New York.

The Buffalo and Niagara Falls Railroad Company would respectfully submit the following report for the year 1846:

Length of road, 22 miles.

Cost of construction to January 1, 1847, \$205,902 95

Passenger earnings, 29,840 92

Extra baggage, furniture, etc., 3,314 82

Mail earnings, 800 00

Amount paid for dividends, 13,915 33

Current expenses, 14,544 39

Number of through passengers.....	42,899
do way passengers.....	7,916
do locomotives.....	3
do passenger cars of eight wheels.....	2
do do four ".....	10
do baggage and lumber cars.....	6
Average number of men employed.....	18
Number of miles run by locomotive.....	24,500

Very respectfully, yours,

W. A. BIRD, Treasurer.

Buffalo, Jan. 24, 1847.

IMPORTANT EXPERIMENTAL TRIP.

On Thursday, May 13th, there was a grand day with the steam navy at Woolwich, the Lords Commissioners of the Admiralty having ordered an experimental trip with all the steam-vessels at that station which were in a state of sufficient forwardness for the purpose. The vessels originally appointed to compose the squadron were, the Amphion, 36 guns (300 horse power;) Sharpshooter (iron screw st.); Rifleman (wooden screw st.); Minx (iron screw st.); Teazer (wooden screw st.); Growler (st. sloop;) Kite (st. v.) and Princess Alice (iron st. packet.) Owing to the arrangements being incomplete, the Sharpshooter and Rifleman did not join the squadron. Between nine and ten o'clock the Lords Commissioners arrived. At ten minutes past eleven the signal was given from the Black Eagle to loose from moorings, and in about ten minutes the fleet started from Woolwich in the following order: Teazer (screw) leading the way, followed by the Amphion, Monkey, Black Eagle, and Kite, and in this order they proceeded down Woolwich Reach, and up the galleons. The Amphion was, of course, the principal object of interest, and upon testing her speed, it was found that with the engines making 45 revolutions, and with her jib set, her rate of speed through the water was 6-8 knots. The Teazer proved to be the slowest boat of the fleet. In Half-way Reach the Black Eagle put on her full speed, and soon came up to the Amphion, and then reducing her engines to half speed, she kept within hail of the Amphion during the remainder of the cruise. Their lordships, who took their station on the paddle-box of the Black Eagle, with Sir J. J. Gordon Bremer, paid especial attention to the Amphion, and signalled to hoist the spanker sail, the wind then blowing stiff from the south-east. The log was again thrown overboard, and the speed with the engines at forty-seven revolutions proved to be 7-8 knots. When the squadron reached Erith, the Minx, which is a faster boat than either the Amphion or Teazer, soon headed the fleet, the Amphion holding on her way, with the Kite on her larboard, and the Black Eagle on her starboard, quarter; the Teazer a considerable distance astern, and the Growler (which had been detained at Woolwich) just bearing in sight. The squadron passed Erith at a quarter past twelve, and a signal was then hoisted from the Admiralty yacht (Black Eagle) to put on more sail; an order which could not then be complied with, as the wind was unfavorable. In Long Reach, the speed of the Amphion was tried at the measured mile, which was done in 8 min. 52 secs, the tide having just ebbed; this gives a rate of speed equal to 6-766 knots, or about 8 miles,

with the engines making 44½ revolutions. As the squadron neared Greenhithe, their lordships boarded the Amphion, and ordered all sail to be set. The spanker, jibs, and topsails were then set, and this vessel, under the conjoint influences of wind and steam, careered rapidly on her way. The Growler, which had continued her course at full speed, here overhauled the fleet, and passing the Amphion to port, took up her station as the leading steamer on the starboard side. The squadron stood on through Sea Reach, where the full operations of both wind and tide was felt; and here the log gave a speed of 10 knots. Having reached the estuary of the Thames, their lordships signified their wish to return, and the Amphion was brought round with great celerity, and they embarked at once on board the Black Eagle. It may be as well to state that this is the first time the experimental trials with the Amphion have proved successful. In all former trials the success was most incomplete, the engines would scarcely work for half an hour without stopping, owing to the canvass collapsing. Metal valves have now, on the recommendation of the authorities at Woolwich been adopted, and the result has proved in the highest degree satisfactory. A correspondent says—"considering the great size of the Amphion, and that her auxiliary engines are only of 300 horse power, a very small proportion for a frigate of 36 guns, her progress through the water was surprising, and leads to the belief that she will prove one of the most serviceable vessels afloat." She carried with her in this cruise, all her guns, with stores, provisions, and water, for three months, and a large supply of coals.

First Manufacture of Railroad Iron in the United States.

We cheerfully give place to the following communication, says the editor of the Merchant's Magazine, from an intelligent correspondent residing at Lynchburg, Va., and a large stockholder in the "Tredegor Iron Company," of the State. Our correspondent, it will be seen, refers to an extract from the "Miners' Journal," published in the MERCHANTS' MAGAZINE for January, 1846, in which it is stated that the first railroad iron was made in 1844; and to a correspondent in a subsequent number of our Journal, who states that the "Great Western Iron Company," on the Allegheny river, produced in 1842, two hundred tons of railroad iron.

To the Editor of the Merchants' Magazine and Commercial Review:—Sir—In the January number of your truly valuable work, I find an article on the manufacture of railroad iron, taken from the Miners' Journal, in which it is stated that only two years have elapsed since the first ton of railroad iron was made in this country; and again in your February number, this subject is noticed, and the belief expressed that the credit is due to the "Great Western Iron Company," of Pennsylvania, for introducing this important branch of the iron business into our country. Both of these statements are erroneous, doubtless unintentionally so. I have no doubt that the first railroad iron made in the United States was manufactured by the Tredegor Iron Works, at Richmond, Va. The evi-

dence I will offer to sustain the claims of Richmond, is, I think, pretty conclusive. I give it in an extract from a letter of John F. Tanner, Esq., secretary of the Tredegor Iron Company, dated Richmond, 1st February, 1846, to whom I made application for accurate information, after reading your January number, lest my memory should mislead me. Mr. Tanner says, "the first railroad iron made at these works was manufactured in (1837) eighteen hundred and thirty-seven. In 1838, we made a considerable quantity for the Richmond, Fredericksburg, and Potomac Railroad Company, and other roads in this State." Ever since that period, occasional orders for railroad iron have been executed at these works. The Tredegor works were erected in 1836-7; commenced operations, I think, the 8th of May, 1837. They were built by Edward Cunningham, John A. Cunningham, and Francis B. Deane, Jr., who conducted them on private account, till 1st of January, 1838; when a joint stock company was formed, under a charter obtained from the legislature, at the session of 1837-8; to which company Messrs. Deane & Cunningham sold their works. So it would seem that the individuals who projected and completed the Tredegor rolling-mill were the pioneers in the manufacture of railroad iron in the United States.

The capital stock of the Tredegor Iron Company is about \$280,000; the annual product turned out, about \$350,000; coal consumed, from 175,000 to 200,000 bushels; pig iron, about 4,000 tons; annual payments for labor, from 50,000 to 60,000 dollars. This establishment manufactures as great a variety of sizes of bar iron, rods, hoops, bands, extra sizes, rounds and squares, locomotive engines, screw moulds, boat plates, and rods for iron vessels, as any other in the Union. The quality of its production is equal to the best iron found in our markets, of English or American manufacture. Besides the extensive works for making malleable iron of almost every description, which the wants of commerce require, there is attached to them a very large foundry, with machine-shops, fitted up in the best manner, with lathes, etc., for building steam-engines, sugar-mills, machinery of every description. Also, a large boring-mill, and all necessary apparatus for finishing ordnance of the largest size ordinarily used, either in our army or navy. From the Tredegor iron foundry, castings of excellent quality and great variety are annually turned out. The ordnance made there is regarded equal to the best which the government procures elsewhere, of which fact the records of the war and navy departments will afford ample testimony.

I feel much confidence in claiming for the Tredegor works the credit of introducing several other important branches of iron manufacture, as well as railroad iron. I believe locomotive rolled axles were first made there; and if my information be correct, they have to a great extent superseded the English and American hammered axles. The same may be said of boat-rib irons; these were also first made at the Tredegor works, and I

am told that even now, there are descriptions of this important article used by government in building iron vessels, which can only be procured at these works.

Without intending any disparagement to other works, or the enterprise of my fellow-citizens in the Northern States, I am induced to make this communication,—first, that correct information may be placed before the public; and secondly, that it may be known that the unrivalled advantages possessed by Virginia, for the manufacture of iron, are not so entirely neglected as many believe them to be.

A STOCKHOLDER OF THE TREDEGOR CO.

Rosin Paving.—A portion of one of the streets in Fayetteville, N. C., is actually paved with solid rosin. A correspondent of the Boston Post says that he has rode a horse and driven a carriage over this novel pavement several times, and a capital road it makes. It has a beautiful clear look, presenting a smooth, hard surface, and it never rots. The manufacturer means to cast it into blocks of the right shape and size for constructing aqueducts, water-courses, and sewers.

Advance of Tolls.—The Reading Railroad Company have given notice that on the first day of July the rate of tolls on coal brought over their road will be advanced ten cents per ton above the present rate, and that an advance of ten cents per ton will be charged on each successive month.

MICHIGAN CENTRAL RAILROAD.—NOTICE TO CONTRACTORS.—Proposals will be received by the Subscriber until the 1st of August next, for the Grading of that portion of the Michigan Central Railroad lying between Antwerp and New Buffalo, a distance of 60 miles.

Profiles and specifications will be ready for examination after the 15th day of July next, at the office of the subscriber, or that of Col. J. M. Berrien, at Kalamazoo, at which time the line will be shown to contractors.

J. W. BROOKS, Supt.
Michigan Central Railroad Office,
6126 Detroit, June 17, 1847.

NOTICE TO CONTRACTORS.—SEALED Proposals will be received until Wednesday, July 15th, in the Borough of Harrisburg, and until Wednesday, July 22d, in the city of Pittsburg, at 10 o'clock A.M., at the Office of the Engineers, for the Grading and Masonry upon fifteen miles of the Pennsylvania Railroad, extending west from Harrisburg, and fifteen miles of said Railroad, extending east from Pittsburg. The grading will include very heavy work, and the amount of Masonry, including the Piers of Abutments of the Bridges across the Susquehanna, three-quarters of a mile in length, will be unusually large. Plans and specifications of the work can be seen at the Engineer's office in each place, for ten days previous to the time appointed for receiving the bids. Any further information can be had upon application to the Chief or Associate Engineers. S. V. MERRICK, President.

BACK VOLUMES OF THE RAILROAD JOURNAL for sale at the office, No. 105 Chestnut street.

A. & G. RALSTON & CO., NO. 4 South Front St., Philadelphia, Pa.
Have now on hand, for sale, Railroad Iron, viz:
180 tons 2½ x ½ inch Flat Punched Rails, 20 ft. long.
25 " 2½ x ½ " Flange Iron Rails.
75 " 1 x ½ " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

•• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.
ja45

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by JOHN A. ROEBLING, Civil Engineer, Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition.
2v191v

FRENCH AND BAIRD'S PATENT SPARK ARRESTER

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark Arrester recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Supt Hartford and New Haven Railroad; W. R. M'Kee, Supt Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Supt New Jersey Railroad Trans. Co.; J. Elliott, Supt Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Supt Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Supt Macon Railroad, Macon, Ga.; J. H. Cleveland, Supt Southern Railroad, Monroe, Mich.; M. F. Chittenden, Supt M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hineckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD, N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.
Philadelphia, Pa., April 6, 1844.

•• The letters in the figures refer to the article given in the Journal of June, 1844. ja45

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

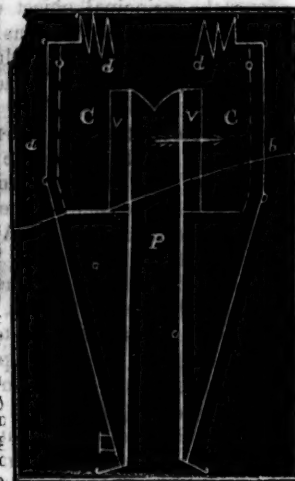
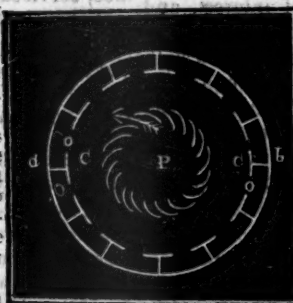
MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Paterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.
Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

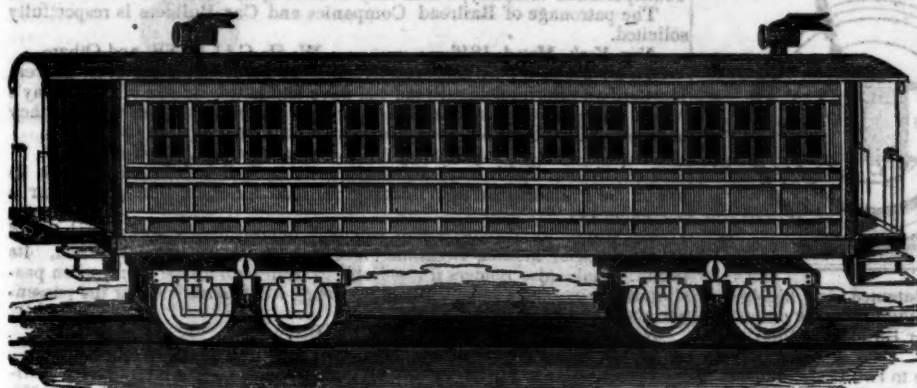
Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callen-lers; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
45 Paterson, N. J., or 60 Wall street, N. York.



DAVENPORT & BRIDGES'

CAR WORKS, CAMBRIDGEPORT, MASS.

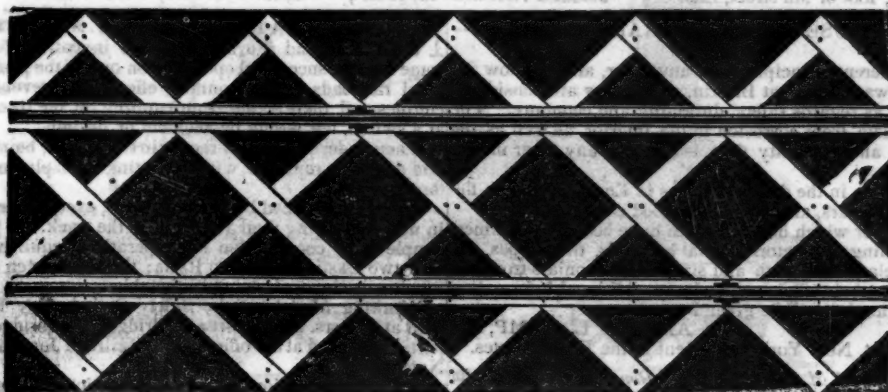


Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes.

THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

THE UNDERSIGNED RESPECTFULLY invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trelis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trelis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes

but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trelis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.		
4,224 Timbers, 11 ft. long, 3 x 6 inches =		
68,696 ft. b.m., at \$10 =	\$686 96	
587 Oak joint blocks 2 ft. x 3 x 15 in. =		
4,403 ft. b.m., at \$13 =	57 24	
13,000 Spikes = 2,250 lbs. at 4½ cts. =	101 25	
Workmanship free of patent charge =	600 00	

Cost of one mile including the laying of the Rail.....\$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.
Civil Engineer and Patentee.
No. 277 South Tenth St., Philadelphia. 331

LAP-WELDED WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,
FROM 1 1-4 TO 6 INCHES DIAMETER,
and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

1y25

28 Platt street, New York.

RAILROAD IRON.

MOUNT SAVAGE IRON WORKS

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address **J. M. HOWE,**

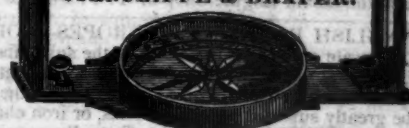
Pres't. Mt. Savage Iron Works,
Dec. 25, 1y* Maryland.

ENGINEERS' AND SURVEYERS'

INSTRUMENTS MADE BY

EDMUND DRAPER,

Surviving partner of
STANCLIFFE & DRAPER.



No 23 Pear street,
1y10 near Third,

below Walnut,
Philadelphia.



Railroad Depots, etc.

West Troy, May 12, 1847.

ANDREW MENEELY.

1y*21

PIG AND BLOOM IRON.—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniata Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
Vine St. Wharf, Philadelphia.

RAILROAD IRON.—THE "MONTGOMERY" Iron Company, Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to **MURDOCK, LEAVITT & CO.,**

1y48

77 Pine St., New York.

LAWRENCE'S ROSENDALE HYDRAULIC Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floods and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

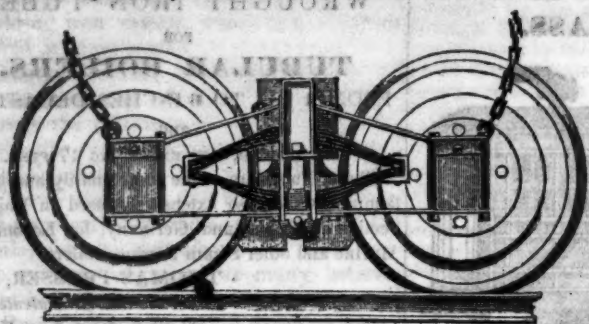
For sale in lots to suit purchasers, in tight paper-barrels, by **JOHN W. LAWRENCE,**

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office. 32 1y

RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER

ber having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—

for sale or imported to order by the subscriber. These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,

75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.				CHAINS.				STRENGTH Tons.
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.			Weight per fathom.	Diameter of iron.			
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.		LBS.	INCH.			
11	4	13	5	10	24	—		50	15-16			20
13	3	9	3	8	16	—		27	11-16			13
14	3	6	11	7	12	8		17	9-16			10
15	2	5	2	6	9	4		13	1-2			7
16	2	4	3	6	8	8		10	7-16			7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1v24

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
Philadelphia, Pa.

1v35

THE SUBSCRIBERS, AGENTS FOR

the sale of
Codorus,
Glendon,
Spring Mill and
Valley,
Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

SAM'L. KIMBER, & CO.,

59 North Wharves,

Jan. 14, 1846. [1v4] Philadelphia, Pa.

RAILWAY IRON.—THE BEST QUALITY

of English Heavy H Rails—60 lbs. to the yard—now in store, landing from the vessel, and on ship board to arrive, for sale on most favorable terms by

DAVIS, BROOKS & CO.,

Jan. 2. [1v] 68 Broad St., New York.

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed,]

WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed,] G. A. NICOLL,

Sup't Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed,] T. L. SMITH,

Jersey City, November 4, 1845.

N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot,

[Signed,] JOHN LEACH,

Jamaica November 12, 1845.

1v19

Sup't Motive Power

NICOLL'S PATENT SAFETY SWITCH

for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee
G. A. NICOLLS,
Reading, Pa.

TO RAILROAD COMPANIES AND MANUFACTURERS OF RAILROAD MACHINERY.

The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,

a45 N. E. cor. 12th and Market sts., Philad., Pa.

RAILROAD IRON.—THE NEW JERSEY

Iron Company, Boonton, N. J., are now making Railroad Bars, and are prepared to execute orders for any required pattern. Apply to

FULLER & BROWN, Agents,

No. 139 Greenwich, corner of Cedar street.

June 1, 1847.

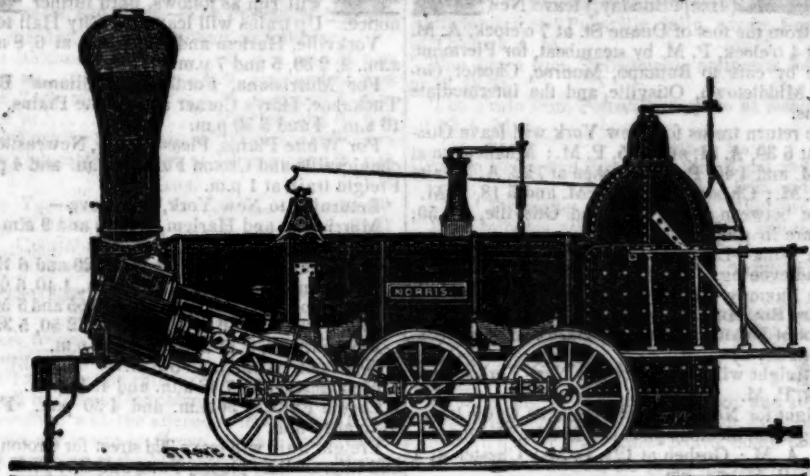
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RAILWAY IRON.—DAVIS, BROOKS

& Co., No. 68 Broad Street, have now in port on Ship-board, 200 Tons of the best English heavy H Rails, 60 lbs. to the lineal yard, which they offer for sale on favorable terms, also, about 6 to 700 Tons now on the way, to arrive shortly, of the same description of Rail.

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class 1.	15 inches Diameter of Cylinder,	× 20 inches Stroke.
" 2,	14	" " × 24 " "
" 3,	14½	" " × 20 " "
" 4,	12½	" " × 20 " "
" 5,	11½	" " × 20 " "
" 6,	10½	" " × 18 " "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion. Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

K E ARNEY FIRE BRICK. F. W. BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, }
Peter Cooper, } New York.
Murdock, Leavitt & Co. }
J. Triplett & Son, Richmond, Va.
J. R. Anderson, Tredegar Iron Works, Richmond, Va.
J. Patton, Jr. }
Colwell & Co. } Philadelphia, Pa.
J. M. L. & W. H. Scovill, Waterbury, Conn.
N. E. Screw Co. }
Eagle Screw Co. } Providence, R. I.
William Parker, Supt. Bost. and Worc. R. R.
New Jersey Malleable Iron Co., Newark N. J.
Gardiner, Harrison & Co. Newark, N. J.
25,000 to 30,000 made weekly. 35

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. **ANDREW C. GRAY**, a45 President of the Newcastle Manuf. Co.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by **A. & G. RALSTON** 4 South Front St., Philadelphia. 284

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 ft. with lathes, work benches, Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to **HENRY ANDREWS**, 48 State st., or to **CURTIS, LEAVENS & CO.**, 106 State st., Boston, or to **A. & G. RALSTON & Co.**, Philadelphia. j45

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.**WELDED WROUGHT IRON TUBES**

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T, L, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by

MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues; suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS, TASKER & MORRIS.

Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 14

PATENT INDESTRUCTIBLE WATER

Pipes. The subscribers continue to manufacture the above Pipes, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits. This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly indestructible. The prices are less than those of iron or lead. We also manufacture Basins and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

J. BALL & CO.

SPRING STEEL FOR LOCOMOTIVES.
Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required; large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,
Albany Iron and Nail Works,

THE SUBSCRIBER IS PREPARED TO
execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER 17 Burling Slip.
New York.

LOCOMOTIVE AND CAR AXLES.
The Subscribers are now prepared to receive orders for the well known and approved Reading Locomotive and Car Axles—drawn to any required pattern from Bloom Iron only. Address

SAM'L KIMBER & CO.,
Willow Street Wharf,
Philadelphia, Pa.

NOTICE TO CONTRACTORS.—ANDROS-COGGIN AND KENNEBEC RAILROAD.
Proposals will be received at the Railroad Office, in Lewiston, until the 17th of June next, for the Grading and Masonry of the 1st Division of the Road, extending from the Atlantic and St. Lawrence Road in Danville, to Green Centre, 14½ miles.

Also, separately, for the Masonry and Woodwork of the Bridges across the Great and Little Andros-coggin Rivers, the Bridges to be constructed on Towne's plan.

Plans and Profiles will be ready for examination, and the route shown, on and after the 10th of June. Satisfactory bidders will be required of bidders unknown to the officers of the company.

The 2d Division, extending to Snow's Pond in Belgrade, 25 miles, will be ready for contract about the 25th of July; and the remainder of the road to Waterville, about the 30th of September.

HOBART CLARK, Agent A. & K. R. R.
EDWARD APPLETON, Engineer.
Railroad Office, Lewiston, May 8, 1847.

THE SUBSCRIBERS ARE PREPARED TO
execute orders at their Phoenix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
No. 79 Water St., New York.

CONCORD RAILROAD.—PASSENGER
Trains in connection with the Lowell & Nashua Railroads, run daily between

Concord and Boston, Sundays excepted, as follows, viz:

Leave Concord at 5:40 and 11:5 a.m. and 3:15 p.m.
Leave Boston at 7 and 11 a.m. and 5 p.m.

This road runs by Nashua and Manchester to Concord N. H., where it connects with the Northern railroad, extending from Concord to the mouth of White river in Vermont, 18 miles of which road, to Franklin, is now opened, and the remainder is rapidly completing.

It is the direct route to Central and northern New Hampshire, and to Montpelier, Burlington, and other towns in northern Vermont, and has a greater proportion of railroad conveyance in those directions than any other line.

It is also the British Steam Mail Line, and the nearest route from Boston to the Canadas. Numerous stages connect with all parts of the road.

For further information, apply at B. P. Cheney & Co.'s Express office, No. 8 Court St., and Averill & Dean, No. 15 Elm St.

All passengers' baggage should be properly marked, and when valued at more than \$50, notices must be given, and extra charges paid, or no loss beyond such amount will be allowed.

N. G. UPHAM, Supt.

NEW YORK AND ERIE RAILROAD LINE
SUMMER ARRANGEMENT. For passengers, twice each way daily,

(except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6:30, A. M. and 4:15, P. M.; Middletown at 7 A. M. and 4:40, P. M.; Goshen at 7:22, A. M. and 5:3, P. M.; Chester at 7:35, A. M. and 5:18, P. M. Fare between New York and Otisville, \$1.50; way-fare in proportion.

For MILK—Leave Otisville at 5½ o'clock, morning and evening.

For FREIGHT—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

H. C. SEYMOUR, Supt.

WESTERN RAILROAD.—ON AND AFTER
Monday, April 5, 1847, the passenger trains will leave daily, Sundays excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.

Albany at 7 1-4 a. m. and 5 p. m. for Boston.

Springfield at 8 1-2 a. m. and 1 p. m. for Albany.

Springfield at 8 1-2 a. m. and 1 1-2 and 3 p. m. (or on arrival of the train from New York) for Boston.

Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m., and arrives in New York at 7 p. m., by the steamboats Traveler, New York, or Champion. Returning, leaves New York at 6 1-4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at 4 p. m., and arrives in New York at 5 a. m.

Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p. m., Springfield next morning at 8 1-2, and arrive in Albany at 1 1-2 p. m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7½ a. m. and 7 p. m. For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 9 1-4 a. m., 1 and 3 p. m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N. B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Supt. and Eng'r.

C. A. SEAD, Agent, 27 State street, Boston.

BOSTON AND PROVIDENCE RAIL-
road. Passenger Notice. Summer Arrangement. On and after Monday, April 5, 1847, the Passenger Trains will run as follows:

Steamboat train via Stonington—Leaves Boston every day, except Sunday, at 5 o'clock p. m.

Accommodation Trains—leave Boston at 7 and 10½ a. m. and 4 p. m., and Providence at 7½ and 10½ a. m. and 4½ p. m.

Dedham trains, leave Boston at 8 a. m., 12½, 3½, 6½ and 9 p. m., Leave Dedham at 7 and 9½ a. m. and 3½, 5½ and 8 p. m.

Stoughton trains, leave Boston at 11½ a. m. and 5½ p. m. Leave Stoughton at 7 10 a. m. and 3½ p. m.

All baggage at the risk of the owners thereof.

W. RAYMOND LEE, Supt.

NEW YORK & HARLEM RAILROAD
CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars

will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a. m., 2, 2 30, 5 and 7 p. m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a. m., 4 and 5 30 p. m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a. m. and 4 p. m.—

Freight train at 1 p. m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 20 and 9 a. m., 1, 3, 4 30, 6, 6 28 and 8 p. m.

Fordham, 8 08 and 9 15 a. m., 1 20 and 6 15 p. m.

Williams Bridge, 8 and 9 08 a. m., 1 10, 6 08 p. m.

Tuckahoe, 7 38 and 8 25 a. m., 12 55 and 5 53 p. m.

White Plains, 7 10 and 8 35 a. m., 12 50, 5 35 p. m.

Pleasantville, 8 15 a. m. and 5 15 p. m.

Newcastle, 8 a. m. and 5 p. m.

Mechanicsville, 7 48 a. m. and 4 48 p. m.

Croton Falls, 7 30 a. m. and 4 30 p. m. Freight train at 10 a. m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a. m. and City Hall 1 p. m.

Returning, leave Croton Falls 10 a. m. and 9½ p. m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a. m., 4 p. m.

Croton Falls for City Hall, 7 30 a. m., 4 30 p. m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a. m. 4 and 5 30 p. m.

White Plains for City Hall, 7 10 and 8 35 a. m., 12 30 and 5 35 p. m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will precede each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers \$1, to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c., to White Plains 50c.

LONG ISLAND RAILROAD COMPANY.
Summer Arrangement. On and after Monday May 1st, trains will run as follows, except Sundays:

Leave—Brooklyn at 9 1-2 a. m. for Farmingdale, 1 1-2 p. m. for Greenport, at 4 p. m. for Farmingdale.

Leave Farmingdale at 7 a. m. for Brooklyn, 12 m. do., at 3 1-4 do. do.

Leave Greenport at 8 1-2 a. m. for Brooklyn.

Leave Jamaica at 8 a. m. for Brooklyn, at 1 p. m. do., at 4½ p. m. do.

On Saturdays, a train will leave Brooklyn for Yaphank, at 4 p. m. Leave Yaphank, on Mondays for Brooklyn at 5 1-2 a. m.

On and after May 15th, and until September 1st, 1847, a train will leave Jamaica at 7 a. m. for Brooklyn—leave Brooklyn at 6 p. m. for Jamaica, and will land and receive passengers at any place between Brooklyn and Jamaica.

On Sundays—leave Brooklyn at 8 1-2 a. m. for Farmingdale; leave Farmingdale at 4 p. m. for Brooklyn.

Freight Trains—leave Brooklyn at 10 a. m. for Greenport; leave Greenport at 12 m. for Brooklyn.

Baggage crates will be in readiness at the foot of Whitehall street, to receive baggage for the several trains, 30 minutes before the hour of starting from the Brooklyn side.

The steamer "Statesman," Captain Nash, leaves Greenport for Sag Harbor on the arrival of the Accommodation train from Brooklyn.

DAVID S. IVES, Supt.

PATERSON RAILROAD
Summer Arrangement.

Commencing April 20th, 1847, the cars will leave

Paterson at New York at

8 o'clock a. m. 9½ o'clock a. m.

11½ o'clock a. m. 12 1-4 o'clock p. m.

4 o'clock p. m. 5½ o'clock p. m.

On Sunday,

8 o'clock a. m. 9½ o'clock a. m.

4 o'clock p. m. 5½ o'clock p. m.

Office 75 Courtlandt St.

BALTIMORE AND SUSQUEHANNA

Railroad.—Reduction of Fare. Morning and Afternoon Trains between Balti-

more and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3 p.m.
Arrives at.....9 a.m. and 6 p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12 p.m. and 8 p.m.
Leaves York for Columbia at.....1 p.m. and 8 a.m.
Leaves Columbia for York at.....8 a.m. and 2 p.m.

FARE.
Fare to York.....\$1 50
" Wrightsville.....2 00
" Columbia.....2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....\$9
Or via Lancaster by railroad.....10
Through tickets to Harrisburg or Gettysburg... 3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owning's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owning's Mills at.....7 a.m.
D. C. H. BORDLEY, Sup't.
Ticket Office, 63 North st.

BOSTON AND MAINE RAILROAD.

Upper Route, to Portland and the East.
SUMMER ARRANGEMENT,
April 1, 1847.

PORTLAND TRAINS.

Leave Boston at 7 A.M. and 2½ P.M.
Leave Portland at 7½ A.M. and 3 P.M.

GREAT FALLS TRAIN.

Leave Boston at 5 P.M.
Leave Great Falls at 6½ A.M.

HAVERHILL TRAINS.

Leave Boston at 11½ A.M. and 6:20 P.M.
Leave Haverhill at 6½ A.M. and 4 P.M.

READING TRAINS.

Leave Boston at 8½ A.M. and 8½ P.M.
Leave Reading at 6 A.M. and 1½ P.M.

MEDFORD BRANCH TRAINS.

Leave Boston at 7½, 11½ A.M., 2½, 5½, 7 P.M.
Leave Medford at 6½, 8 A.M., 1½, 4½, 6 P.M.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

1y31 CHAS. MINOT, Super't.

NORWICH AND WORCESTER RAILROAD.

Summer Arrangement. Change of Hours. Commencing on Wednesday, April 21, 1847.

Accommodation Trains, daily, (except Sunday.)
Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 6½ a.m., and 4½ p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 2½ p.m. train from Boston.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 6½ p.m., daily, except Sunday, stopping at Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Leave Norwich at 7, and Worcester at 6:30 a.m. Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars. J. W. STOWELL, Sup't

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PHILADELPHIA AND READING RAILROAD.

Passenger Train Arrangement for 1847.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A.M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A.M.

Fares.
Between Phila. and Pottsville, 90 \$3.50 and \$3.00
" " Reading, 58 2.25 and 1.90
" " Pottsville, 34 1.40 and 1.20
Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets.

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Summer Arrangement.

Philadelphia for Baltimore... 8 a.m. and 10 p.m.
Baltimore for Philadelphia... 9 a.m. and 8 p.m.
Connecting with Mail Lines North, South & West.

On Sundays, only the 10 P. M. Lines run.

The Boat Lines, via Newcastle & Frenchtown R.R. Leave Philadelphia at 3½ p.m. No line on Sun-Leave Baltimore at 3 p.m. 5 day.

Accommodation Trains between Philadelphia & Wilmington.—Philadelphia to Wilmington, 8 a.m., mail, 12½ p.m., 4 p.m., 7 p.m., 10 p.m. mail. Wilmington to Philadelphia, 7 a.m., 1 p.m., mail, 4½ p.m., 7 p.m., 12½ a.m., night mail.

J. R. TRIMBLE, Engineer and General Superintendent.

CONNECTION BETWEEN THE BOSTON AND LOWELL and the Boston and Maine Railroads.

On and after April 1st, 1847, passenger trains between these two roads, will run as follows, viz:

Leaving Lowell at 7, 11 1-4 a.m., and 2 1-2, 4 1-2, and 6 1-2 p.m., to connect at the junction in Wilmington with the eastward trains—at 7 a.m. and 2 1-2 p.m. with those to Portland; at 4 1-2 p.m. to Great Falls only, with a detention of 45 minutes at the junction, and at 11 1-4 a.m. and 6 1-2 p.m. to Haverhill only. Leaving the junction in Wilmington, for Lowell, at about 7 1-4 a.m. on arrival of the morning train from Haverhill; at about 9 a.m., on arrival of the morning trains from Great Falls. At about 11 3-4 a.m., on arrival of the morning train from Portland. At about 5 p.m. on arrival of the afternoon trains from Haverhill. At about 7 1-4 p.m., on arrival of the afternoon train from Portland.

NEW YORK AND PHILADELPHIA RAILROAD line—direct.

Via Newark, New Brunswick, Princeton, Trenton, and Bristol. (Through in six hours.) Leaving New York daily from the foot of Liberty street.

Morning line.....9 o'clock a.m.
Mail pilot line.....4½ " p.m.

The lines proceed direct to Bristol without change of cars, and thence by the new steamer, "John Stevens," to Philadelphia.

FARE BETWEEN NEW YORK & PHILA.

First class cars.....\$4 00
Second class cars.....3 00

Passengers will procure their Tickets at the office foot of Liberty st., where a commodious steamboat will be in readiness with Baggage-crates on board.

Fifty pounds of baggage will be allowed to each passenger in this line, and passengers are expressly prohibited from taking anything as baggage but their wearing apparel, which will be at the risk of the owner.

Philadelphia Baggage-crates are conveyed from city to city, without being opened by the way. Each train is provided with a car, in which are apartments and dressing rooms expressly for ladies' use.

Returning, the lines leave Philadelphia from the foot of Walnut st. at 9 a.m. and 4 1-2 p.m.

The lines for Baltimore leave Philadelphia daily, except Sundays, at 8 a.m., 3½ and 10 p.m., and Sundays only at 10 p.m.—being a continuation of the line from New York.

25tf

LITTLE MIAMI RAILROAD.—OPEN

TO SPRINGFIELD—Distance 84 miles.

connecting at Xenia and Springfield with Messrs. Neil, Moore, & Co's. daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City. via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columbus, Delaware, and the Mansfield and Sandusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as follows: Leave Cincinnati daily at 9 A.M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A.M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon.....\$1 00
" " " Xenia.....1 50
" " " Springfield... 2 00
" " " Columbus... 4 00
" " " Sandusky city 8 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every \$500 in value over that amount.

The 1½ P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th inst.

A freight train will run daily.

47tf W. H. CLEMENT, Sup't.

BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the Great Western Mail leaves Bal-

timore every morning at 7½ and

Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. 13y1

LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 26 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and 9 a.m. from Frankfort, other hours as above. 351y

CENTRAL AND MACON AND WESTERN RAILROADS, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macon—Central Railroad 190
Macon to Atlanta—Macon and Western 101
Atlanta to Oothcaloga—Western and Atlantic 80
Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings..... \$0 50 To Atlanta. \$0 75 To Oothcaloga.
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones..... 0 50 0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot..... 0 20 0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot..... 0 20 pr. 100 lbs. 35
Crockery, per cubic foot..... 0 15 " " 35
Molasses and Oil, per hhd., (smaller casks in proportion). 9 00 12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each..... 1 25 1 50
Ploughs, (small,) and Wheelbarrows..... 0 80 1 05
Salt, per Liverpool Sack..... 0 70 0 95
Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.
Goods consigned to the subscriber will be forwarded free of Commissions.
Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R. Savannah, Aug. 15th, 1846. 1y34

CENTRAL RAILROAD-FROM SAVANNAH TO MACON. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, \$8 00. Freight—On weight goods generally... 50 cts. per hundred. On measurement goods... 13 cts. per cubic ft. On brls. wet (except molasses and oil)..... \$1 50 per barrel. On brls. dry (except lime).... 80 cts. per barrel. On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred. On hdds. and pipes of liquor, not over 120 gallons..... \$5 00 per hhd. On molasses and oil..... \$6 00 per hhd. Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE, y40 Gen'l. Sup't. Transportation.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from

Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tusculum Railroad in N. Alabama. Fare through from Charleston to Montgomery daily..... \$26 50 Fare through from Charleston to Huntsville, Decatur and Tusculum..... 22 00 The South Carolina Railroad Co. engage to receive merchandise consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad. 1y35 JOHN KING, Jr, Agent.

GEORGIA RAILROAD, FROM AUGUSTA TO ATLANTA—171 MILES. AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

RATES OF FREIGHT.		Between Augusta and Oothcaloga and Dalton. 250 miles.	Between Charleston, Oothcaloga and Dalton. 386 miles.
1st class.	Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	\$0 16	\$0 26
2d class.	Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 45	0 70
	Cotton, per 100 lbs.....	0 45	0 65
	Molasses, per hoghead.....	8 50	13 50
	" " barrel.....	2 00	3 25
	Salt per bushel.....	0 17	95
	Salt per Liverpool sack.....		
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows.....	0 75	1 37
German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.			
Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.			
J. EDGAR THOMSON, Ch. Eng. and Gen. Agent. Augusta, Sept. 2d, 1846. *44 1y			

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4 P.M., Philadelphia at 10 P.M., and Baltimore at 6 A.M., proceed without delay at any point, by this line, reaching Richmond in eleven, Petersburg in thirteen and a half hours, and Charleston, S. C., in two days from Baltimore.

Fare from Baltimore to Charleston..... \$21 00 " " " Richmond..... 6 60

For Tickets, or further information, apply at the Southern Ticket Office, adjoining the Washington Railroad Office, Pratt street, Baltimore, to 1y14 STOCOTON & FALLS, Agents.

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculum, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT, Chief Engineer. Atlanta, Georgia, April 16th, 1846. 1y1

FRANKLIN HOUSE,

No. 105 Chestnut Street, Philadelphia.

The undersigned takes the liberty of calling the attention of the readers of the Journal to the fact that the Office is removed from New York to the FRANKLIN HOUSE, Philadelphia, where he will be always pleased to meet and greet them. They will not only find a pleasant Reading Room, with lots of foreign periodicals, treating of Railroads and Machinery, but they will always find good-sized and airy rooms—clean beds—and a well supplied table. If they would have further proof of this, they have only to call, and judge for themselves, and much oblige the proprietor,
D. K. MINOR.

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